

### **Abstract**

Methods and apparatus for electronically addressing and interrogating microarrays are disclosed. The described microarrays include a plurality of features disposed on a substrate. Each of the features has a first electrode disposed on the substrate, a second electrode disposed on the substrate, and a probe disposed between the first electrode and second electrode. The substrate also includes addressing circuitry in operable relation to the features. Method of using the microarrays are also described.